Environmental Studies Syllabus

FACULTY OF ARTS/SCIENCE/COMMERCE

CBCS SYLABI FOR SEMESTER 1 AND 2(FIRST YEAR B. A./B.Sc./B.Com.)

FOUNDATION ELECTIVE COURSE

(A COMMON COURSE FOR ALL FACULTIES)

NAME OF THE COURSE: ENVIRONMENTAL STUDIES

(FOR ENGLISH MEDIUM STUDENTS)

SEMESTER 1

TEXT PRESCRIBED: Textbook of Environmental Studies for Undergraduate Courses- by Erach Bharucha (Universities Press)

Unit 1: The Multidisciplinary Nature of Environmental Studies

Unit 2: Natural Resources

Unit 3: Ecosystems

Unit 4: Biodiversity

Unit 8: Field Work(for Assignments Only)

DISTRIBUTION OF MARKS

Q1. Objective type questions (10 out of 10).	10 Marks
Q2. Short-Answer questions (4 out of 6).	12 Marks
Q3. Short-Notes (2 out of 4).	16 Marks
Q4. Essay type question (1 out of 2).	16 Marks
Q5. Essay type question (1 out of 2).	16 Marks

TOTAL: 70 Marks

SEMESTER 2

TEXT PRESCRIBED: Textbook of Environmental Studies for Undergraduate Courses- by Erach Bharucha (Universities Press)

Unit 5: Pollution

Unit 6: Social Issues and the Environment

Unit 7: Human Population and the Environment

Unit 8: Field Work(for Assignments Only)

DISTRIBUTION OF MARKS

Q1. Objective type questions (10 out of 10).	10 Marks
Q2. Short-Answer questions (4 out of 6).	12 Marks
Q3. Short-Notes (2 out of 4).	16 Marks
Q4. Essay type question (1 out of 2).	16 Marks
Q5. Essay type question (1 out of 2).	16 Marks
	TOTAL: 70 Marks

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Renewable and Non-Renewable Energy Sources Syllabus

VEER NARMAD SOUTH GUJARAT UNIVERSITY

syllabus for B. Sc. Semester III or IV

Subject: Non Renewable Energy Sources (GEC)

[2 credit course- 3 hours per week]

(In force from year : 2012 – 2013)

Introduction to Non Renewable energy sources:

- Oil and Natural Gas(Fossil Fuels): Introduction, Crude Oil Reserves, Natural Gas Reserves, Recovering Oil and Gas, Impact on Environment.
- Coal: Introduction, Coal as a Fossil Fuel of the Future, Coal Reserves, Coal Combustion for Power Generation, Environmental Impacts.
- Nuclear Energy: Introduction, Energy and Mass, Nuclear Fission, Chain Reaction, Critical Mass, Power from Nuclear Fission Reactors, Thermonuclear Fusion, Difficulties, About Fuel Reserves, Safety and Waste Issues.
- Unconventional Oil and Gas Resources: Oil Shale, Tar Sands
- Fossil Fuels and Greenhouse Effect: Greenhouse Effect, Energy and Greenhouse Gas Emissions, Weather and Climate, Natural Change of Climate, Global Warming.

Recommended books:

1. Our Future Resources: Alternatives and the environment. Christian Ngô & Joseph B. Natowitz. JOHN WILEY & SONS 2009
2. Energy and Environment by E.H. Thorndike, Addison – Wesley 1976.
3. Energy , Resources and Policy by R.C. Dorf, Addison – Wesley 1978.
4. Energy by K. Parikh , The Macmillan Company of India, 1976.

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VEER NARMAD SOUTH GUJARAT UNIVERSITY

syllabus for B. Sc. Semester III or IV

Subject: Renewable Energy sources (GE)

[2 credit course- 3 hours per week]

(In force from year : 2012 – 2013)

Introduction to Renewable energy sources:

- Solar energy: Introduction, direct solar energy, Use of direct solar energy, Technologies for converting solar energy to electricity.
- Wind energy: Introduction, Power generation in the windmill, Advantages disadvantages of windmill.
- Tidal energy: Introduction, types of Tidal power generation systems, Advantages disadvantages of Tidal power.
- Geo-Thermal energy: Introduction, origin and nature of geothermal energy, Geothermal energy extraction. Geothermal fields in India. Advantages disadvantages of geothermal energy.
- Hydroelectric energy: Introduction, hydroelectric power generation, Advantages disadvantages of hydroelectric energy.

Recommended books:

1. Renewable Energy sources and their environmental Impact. by S A Abbasi & Naseema Abbasi. [PHI] 2001.
2. Energy and Environment by E.H. Thorndike, Addison – Wesley 1976.
3. Energy , Resources and Policy by R.C. Dorf, Addison – Wesley 1978.
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